

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF
SHENG-SHING LI ET AL

APPLICATION NO: **10/045,391**

FILED: **November 9, 2001**

FOR: WETTABLE POLYOLEFIN FIBERS AND
FABRICS

Group Art Unit: **1794**

Examiner: **Peter Y. Choi**

Confirmation No. 2361

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF

Sir:

This Appeal is from the Final Rejection of claims 1, 2, 7-12, 17-19 and 25 dated August 18, 2009.

The Notice of Appeal was timely filed November 18, 2009. A petition for a 3 month extension of time is attached herewith, making this Brief due Monday, April 19, 2010. This Brief is timely filed.

The Commissioner is hereby authorized to charge any necessary fee or credit any overpayment to Deposit Account No. 03-1935.

(1) REAL PARTY OF INTEREST

The real party of interest, by virtue of an assignment recorded in the United States Patent and Trademark Office on May 7, 2002, reel/frame 012881/0490 is:

Ciba Specialty Chemicals Corp.
P.O. Box 2005
540 White Plains Road
Tarrytown, New York 10591

(2) RELATED APPEALS AND INTERFERENCES

To the knowledge of the undersigned, there are no related appeals or interferences.

(3) STATUS OF THE CLAIMS

Claims 3-6, 13-16 and 20-24 are canceled.

Claims 1, 2, 7-12, 17-19 and 25 are pending.

Claims 1, 2, 7-12, 17-19 and 25 are rejected.

Claims 1, 2, 7-12, 17-19 and 25 are being appealed.

Claims 1, 2, 7-12, 17-19 and 25 are present in an attached appendix.

(4) STATUS OF AMENDMENTS

The claims now stand on Appeal as amended in the Amendment After Final filed November 28, 2008. Said Amendment After Final was entered with a Request for Continued Examination filed December 17, 2008.

This brings up to date the status of the claims. A clean copy of the claims is in the attached Claims Appendix.

(5) SUMMARY OF THE CLAIMED SUBJECT MATTER

Claim 1, independent, is directed to a wettable polyolefin fiber or filament, comprising a melt blend which comprises

(a) a polyolefin and

(b) at least one ethoxylated aliphatic alcohol of the formula



where x has an average value of 2.5.

The term "wettability" means to facilitate the movement of water past or through the wettable material, page 2, lines 18-22 of the specification. Providing wettability to hydrophobic polyolefin fabrics would make them more suitable for use in for example baby diapers, page 5, lines 10-14.

The present specific ethoxylated alcohol is described on page 6, lines 22-25. This compound is commercially available as UNITHOX 420, page 7, line 7. The specific ethoxylated alcohol is also the one employed in Example 1 on pages 26-28.

Claim 2, dependent on claim 1, requires the polyolefin to be polypropylene or polyethylene. Page 10, last line through page 11, line 3.

Claim 7, dependent on claim 1, is aimed at where the ethoxylated alcohol is present from about 0.1% to about 15% by weight, based on the weight of the polyolefin. Support is found on page 9, lines 13-16.

Claim 8, dependent on claim 7, requires that the ethoxylated alcohol is present from about 1% to about 7% by weight, based on the weight of the polyolefin. Support is found on page 9, lines 13-16.

Claim 9, dependent on claim 1, is aimed at a bi-component fiber comprising a polyolefin component where the polyolefin component comprises a melt blend according to claim 1. Support is found on page 7, lines 26-27.

Claim 10, dependent on claim 1, is aimed at a woven or nonwoven fabric comprising polyolefin fibers of claim 1. Support is found on page 1, lines 4-5 and page 10, lines 23-26.

Claim 11, dependent on claim 10, requires the polyolefin to be polypropylene or polyethylene. Support is found on page 10, last line through page 11, line 3.

Claim 12, dependent on claim 9, is aimed at woven or nonwoven bi-component fibers. Support is found on page 7, lines 26-27 and page 1, lines 4-5.

Claim 17, dependent on claim 10, is aimed at an article of manufacture comprising a woven or nonwoven fabric selected from the group consisting of disposable diapers, training pants, feminine napkins, tampons, incontinence care products, wet and dry wipes, wound dressings, surgical capes, filter medial and battery separators.

Support is found on page 10, lines 7-11 and page 1, lines 4-5.

Claim 18, dependent on claim 1, requires that the melt blend further comprises a different ethoxylated alcohol other than that of claim 1. Support is found on page 7, lines 1-6.

Claim 19, dependent on claim 1, requires that the melt blend additionally comprises 2 mole ethoxylated stearyl alcohol, support is found on page 7, lines 1-6.

Claim 25, dependent on claim 1, is aimed at a fiber or filament further comprising a stabilizer selected from the group consisting of hindered amine light stabilizers, phenolic antioxidants, phosphites or phosphonites, hydroxylamines, benzofuranones and hydroxyphenylbenzotriazole, hydroxybenzophenone or tris-aryl-s-triazine UV absorbers.

Support is found on page 12, line 20 through page 24, line 10.

(6) GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claims 1, 2, 7-12, 17-19 and 25 are rejected under 35 USC 103(a) as being unpatentable over Mor, et al., U.S. Pat. No. 6,146,757 in view of UNITHOX Ethoxylated Alcohols Technical Release 4022.2.

(7) ARGUMENTS

Claims 1, 2, 7-12, 17-19 and 25 are rejected under 35 USC 103(a) as being unpatentable over Mor, et al., U.S. Pat. No. 6,146,757 in view of UNITHOX Ethoxylated Alcohols Technical Release 4022.2.

Appellants argue claims 1, 2, 7-12, 17-19 and 25 together as one group.

Mor teaches wettable fibers or filaments comprising a thermoplastic polymer having incorporated therein a first wetting agent and a second wetting agent. The polymer is preferably an olefin polymer. The second wetting agent is at least one compound selected from the group consisting of an alkoxylated fatty alcohol and a polyoxyalkylene modified organosilicone polymer. See col. 5, lines 53-54.

The alkoxylated fatty alcohol of Mor has an alkyl group of from about 8 to about 22 carbon atoms and on average about 1 to about 100 moles of ethylene oxide. The number of moles of ethylene oxide are preferably from about 2 to about 10 moles and most preferably from about 3 to about 6 moles, col. 6, lines 32-39.

The present ethoxylated alcohol compounds contain an alkyl group of 30 carbons. Mor does not teach the present ethoxylated alcohol.

The UNITHOX data sheet is cited as disclosing the present ethoxylated alcohol, specifically UNITHOX 420. The UNITHOX data sheet discloses certain ethoxylated alcohols as lubricants, emulsifiers or dispersants and not as melt additives for plastics.

Appellants agree the limitations of present claim 1 are met with the combined disclosure of the cited references.

The Examiner states on page 5 of the Action that "It would have been obvious to one of ordinary skill in the wettable polymer fiber art at the time the invention was made to form the wettable polypropylene fiber of Mor, substituting the ethoxylated fatty alcohol of Mor with UNITHOX 420, as taught by Technical Release 4022.0, motivated by the desire of forming a conventional wettable polymer fiber with a commercially available wetting agent suitable for use in textile processing and finishing and processing aids, and such a substitution of an ethoxylated fatty alcohol wetting agent for another ethoxylated fatty alcohol wetting agent yields a predictably resulting wettable polyolefin fiber to one of ordinary skill in the art."

Appellants rebut these rejections on two grounds.

Firstly, Appellants submit that the combined references do not provide any motivation to substitute UNITHOX 420 for an alkoxylated alcohol of Mor. The UNITHOX data sheet describes the ethoxylates as suitable lubricants, emulsifiers or dispersants but not as melt additives for plastics. Mor does disclose that his alkoxylated alcohols are "incorporated" into the thermoplastic fibers. The alkoxylated alcohols of Mor are distinct from those of the data sheet. Appellants submit therefore that one skilled in the art, when attempting to prepare a suitably wettable polyolefin fiber, would be motivated to employ an alkoxylated alcohol of Mor and not of the UNITHOX data sheet. Mor and the data sheet describe different uses for different alkoxylated alcohols. There is no overlap of the alkoxylated alcohols of the data sheet with those of Mor (by virtue of the carbon chain length).

Secondly, Appellants submit that the performance of UNITHOX 420 as a melt additive to improve the wettability of polyolefin fibers is unexpected and is not predictable.

To support this, two Rule 132 Declarations were submitted during prosecution. The first Gande Declaration was filed October 26, 2006. The second Gande Declaration was filed May 7, 2007.

In the first Declaration, present UNITHOX 420 is compared to UNITHOX 480 and UNITHOX 750, two other ethoxylated alcohols not of the present claims. The sample with an ethoxylated alcohol of the present invention displays a water absorption of 450%. The samples with UNITHOX 480 and 750 display a water absorption of 280% and 150%, respectively.

In the second Declaration, UNITHOX 420 is compared UNITHOX 550, another ethoxylated alcohol not of the present claims. The sample with present UNITHOX 420 displays a liquid absorption capacity of 74%. The sample with UNITHOX 550 has a liquid absorption capacity of 30%.

Thus, results are obtained for UNITHOX 420 compared to three other ethoxylated alcohols not of the present claims. UNITHOX 420 is superior in providing polyolefin fibers with liquid absorption characteristics. The three comparison UNITHOX products were chosen to rebut specific rejections during the course of prosecution.

These outstanding results are unexpected and could not have been predicted based on the cited art.

The present invention represents an important teaching to the public which cannot at all be gleaned from the combination of cited art.

In view of the two Gande Declarations and the above discussion, Appellants submit that the 35 USC 103(a) rejections are successfully rebutted.

Appellants respectfully request that the rejections be reconsidered and be reversed.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'T. Stevenson', with a long horizontal flourish extending to the right.

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Agent for Appellants
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April 19, 2010

Attachments: Claims Appendix
Evidence Appendix
Related Proceedings Appendix
Petition for a 3 month extension of time

(8) CLAIMS APPENDIX

1. (previously presented) A wettable polyolefin fiber or filament, comprising a melt blend

which comprises

(a) a polyolefin; and

(b) at least one ethoxylated aliphatic alcohol of the formula



where x has an average value of 2.5.

2. (original) A fiber or filament according to claim 1 in which the polyolefin is polypropylene or polyethylene.

3-6. (canceled)

7. (original) A fiber or filament according to claim 1 wherein the compounds of component (b), in total, are present from about 0.1 % to about 15 % by weight, based on the weight of the polyolefin of component (a).

8. (original) A fiber or filament according to claim 7 wherein the compounds of component (b), in total, are present from about 1 % to about 7 % by weight, based on the weight of the polyolefin of component (a).

9. (original) A bi-component fiber comprising a polyolefin component, wherein the polyolefin component comprises a melt blend comprising components (a) and (b) according to claim 1.

10. (previously presented) A woven or nonwoven fabric comprising polyolefin fibers or filaments according to claim 1.

11. (original) A woven or nonwoven fabric according to claim 10 wherein the polyolefin is polypropylene or polyethylene.

12. (previously presented) A woven or nonwoven fabric comprising bi-component fibers according to claim 9.

13-16. (canceled)

17. (original) An article of manufacture comprising a woven or nonwoven fabric according to claim 10 selected from the group consisting of disposable diapers, training pants, feminine napkins, tampons, incontinence care products, wet and dry wipes, wound dressings, surgical capes, filter media and battery separators.

18. (previously presented) A fiber or filament according to claim 1 in which the melt blend additionally comprises a different ethoxylated aliphatic alcohol.

19. (original) A fiber or filament according to claim 1 in which the melt blend additionally comprises a 2 mole ethoxylated stearyl alcohol.

20-24. (canceled)

25. (previously presented) A fiber or filament according to claim **1** further comprising a stabilizer selected from the group consisting of hindered amine light stabilizers, phenolic antioxidants, phosphites or phosphonites, hydroxylamines, benzofuranones and hydroxyphenylbenzotriazole, hydroxybenzophenone or tris-aryl-s-triazine UV absorbers.

(9) EVIDENCE APPENDIX

Two Rule 132 Declarations were submitted during prosecution and are of record. Both Declarations are by Dr. Matthew Gande. The first Gande Declaration was filed October 26, 2006. The second Gande Declaration was filed May 7, 2007.

(10) RELATED PROCEEDINGS APPENDIX

As Appellants are not aware of any other related proceedings, no copies of decisions rendered by a court or the Board are attached.